

TABLE OF CONTENTS

Rewvisions From Previous Draft Version	ii
PREFACE	vi
TABLE OF CONTENTS	vii
LIST OF TABLES	xii
LIST OF FIGURES	xiv
LIST OF FIGURES	xiv
ACRONYMS	xv
EXECUTIVE REPORT	19
Scope	19
Relationship to the Military	19
Environmental Compliance	19
Ecosystem Status	21
Partnerships	21
Plan Components	21
Planned Major New Initiatives	22
Rewvisions From Previous Draft Version	22
Ongoing Planning Activities	22
Benefits and Costs	23
Summary	23
CHAPTER 1. INTRODUCTION	24
1.1 Goals, Objectives, and Policies	24
1.1.1 Goals	24
1.1.2 Objectives	25
1.1.3 Fort Wainwright's Land and Natural Resources Management Policy	26
1.2 The Plan	27
1.2.1 Purpose of the Plan	28
1.2.2 Scope of the Plan	28
1.2.3 Structure of the Plan	29
1.2.4 Resource Management Plan	30
1.2.5 Section 106, National Historic Preservation Act	30
1.3 Background	31
1.3.1 Location and Neighbors	31
1.3.2 Acreage, Acquisition, and Land Status	31
1.3.3 Installation History	33
1.3.4 Historic Natural Resources Program Development	34
1.4 Military Mission	37
1.4.1 Overview	38
1.4.2 Relationships Between Natural Resources and the Military Mission	39
1.4.3 Future Military Mission Impacts on Natural Resources	41
1.5 Joint Management and Stewardship	42
1.6 Responsibilities	43
1.7 Partnerships	44
1.7.1 Federal Agencies	44
1.7.2 State Agencies	45
1.7.3 Fairbanks North Star Borough	47
1.7.4 Tanana Chiefs Conference	47
1.7.5 Other Partners	47
1.8 National Environmental Policy Act Compliance and Integration	48

1.8.1	National Environmental Policy Act of 1969	48
1.8.2	Army Regulations 200-2 and 200-3	48
1.8.3	INRMP and NEPA Integration	49
1.8.4	Purpose of and Need for the Proposed Action	49
1.8.5	Description of the Proposed Action and Alternatives	50
1.8.6	Scope of Analysis	51
1.8.7	Interagency Coordination and Review	51
CHAPTER 2.	AFFECTED ENVIRONMENT	57
2.1	Facilities.....	57
2.1.1	Range Facilities.....	57
2.1.2	Transportation System	58
2.1.3	Water Supply	58
2.1.4	Projected Changes in Facilities	59
2.2	Physical Resources.....	59
2.2.1	Topography	59
2.2.2	Geology	59
2.2.3	Soils.....	61
2.2.4	Water Resources	61
2.2.5	Climate	63
2.3	Biological Resources	63
2.3.1	Biodiversity	63
2.3.2	Flora	64
2.3.3	Fauna	73
2.3.4	Special Interest Management Areas.....	76
2.4	Cultural Resources	77
CHAPTER 3.	ECOSYSTEM MANAGEMENT	91
3.1	Ecosystem Management Goals and Objectives	91
3.2	Ecosystem Management Planning	92
3.2.1	Ecosystem Management Plan	92
3.2.2	Aerial Monitoring Management Plan	93
3.3	Ecosystem Management Inventory and Monitoring	94
3.4	Ecosystem Management Program.....	94
3.4.1	Maintenance of Ecosystem Integrity.....	94
3.4.2	Ecosystem Management Program Procedures	95
3.4.3	Ecosystem Users	96
3.4.4	Land Use	96
3.4.5	Public Access, Encroachment, and Trespass	100
3.4.6	Fort Wainwright as Part of a Regional Ecosystem Management Effort	103
3.4.7	Land Management Units	104
3.5	Ecosystem Management Alternatives	109
3.6	Ecosystem Management Responsibilities	111
CHAPTER 4.	PHYSICAL RESOURCES MANAGEMENT	116
4.1	Integrated Training Area Management (ITAM)	116
4.1.1	ITAM Goals and Objectives	116
4.1.2	ITAM Planning - Training Requirements Integration (TRI)	117
4.1.3	ITAM Monitoring (Land Condition – Trend Analysis)	119
4.1.4	Management	121
4.1.5	ITAM Responsibilities	125
4.2	Watershed Management.....	126
4.2.1	Watershed Management Goals and Objectives	126
4.2.2	Watershed Management Planning	126

4.2.3 Watershed Management Inventory and Monitoring	128
4.2.4 Watershed Management.....	133
4.2.5 Watershed Management Responsibilities	136
4.3 Minerals Management.....	137
4.3.1 Minerals Management Program Goals and Objectives.....	137
4.3.2 Minerals Management Program Description	137
4.3.3 Minerals Management Program Responsibilities	138
CHAPTER 5. BIOLOGICAL RESOURCES MANAGEMENT	140
5.1 Wetland Management	140
5.1.1 Wetland Management Program Goals and Objectives	140
5.1.2 Wetland Management Plan	140
5.1.3 Wetland Inventory and Monitoring.....	141
5.1.4 Wetland Management	144
5.1.5 Wetland Management Responsibilities.....	150
5.2 Forest Management.....	150
5.2.1 Forestry Program Goals and Objectives	150
5.2.2 Forest Management Plan.....	150
5.2.3 Forest Inventory	152
5.2.4 Forest Management.....	153
5.2.5 Forestry Responsibilities.....	157
5.3 Fire Management	158
5.3.1 Fire Management Goals and Objectives	158
5.3.2 Fire Management Plan	158
5.3.3 Fire Management Inventory.....	160
5.3.4 Fire Management	161
5.3.5 Fire Management Responsibilities	165
5.4 Fish and Wildlife Management.....	165
5.4.1 Fish and Wildlife Goals and Objectives.....	165
5.4.2 Habitat Management Plan.....	166
5.4.3 Fish and Wildlife Inventory and Monitoring	167
5.4.4 Fish and Wildlife Management.....	169
5.4.5 Fish and Wildlife Management Responsibilities	175
5.5 Endangered Species Management	175
5.5.1 Endangered Species Management Goals and Objectives	175
5.5.2 Endangered Species Planning	176
5.5.3 Endangered Species Inventory and Monitoring.....	176
5.5.4 Endangered Species Management	176
5.5.5 Endangered Species Program Responsibilities	177
5.6 Special Interest Area Management	177
5.6.1 Special Interest Area Goals and Objectives	178
5.6.2 Special Interest Area Management Plan	178
5.6.3 Special Interest Area Inventory and Monitoring.....	179
5.6.4 Special Interest Area Management	179
5.6.5 Special Interest Area Responsibilities.....	181
5.7 Pest Management	181
5.7.1 Pest Management Goals and Objectives	181
5.7.2 Pest Management Plan	182
5.7.3 Pest Management Inventory and Monitoring.....	182
5.7.4 Pest Management	183
5.7.5 Pest Management Program Responsibilities.....	185
CHAPTER 6. SOCIAL RESOURCES MANAGEMENT	193

6.1	Education, Awareness, and Public Outreach	193
6.1.1	Education, Awareness, and Public Outreach Goals and Objectives	193
6.1.2	Education, Awareness and Public Outreach Program Planning	193
6.1.3	Education, Awareness and Public Outreach Survey	194
6.1.4	Education, Awareness, and Public Outreach	195
6.1.5	Education and Public Outreach Responsibilities	197
6.2	Outdoor Recreation.....	197
6.2.1	Outdoor Recreation Program Goals and Objectives	197
6.2.2	Outdoor Recreation Program Management Plan	198
6.2.3	Outdoor Recreation Monitoring.....	198
6.2.4	Outdoor Recreation Management	201
6.2.5	Outdoor Recreation Program Responsibilities.....	209
6.3	Conservation Enforcement.....	210
6.3.1	Conservation Enforcement Goals and Objectives.....	210
6.3.2	Conservation Enforcement Program Planning.....	210
6.3.3	Conservation Enforcement Surveillance.....	211
6.3.4	Conservation Enforcement.....	211
6.3.5	Conservation Enforcement Responsibilities	214
6.4	Cultural Resources	215
6.4.1	Cultural Resources Program Goals and Objectives	215
6.4.2	Cultural Resources Planning	215
6.4.3	Cultural Resources Inventory and Monitoring.....	215
6.4.4	Cultural Resources Management	216
6.4.5	Cultural Resources Management Responsibilities	216
CHAPTER 7. SUPPORT RESOURCES MANAGEMENT		220
7.1	The National Environmental Policy Act.....	220
7.1.1	NEPA Program Goals and Objectives	220
7.1.2	NEPA Program Description.....	220
7.1.3	NEPA Program Responsibilities	221
7.2	Decision Support Systems (GIS, RFMSS, IFS).....	221
7.2.1	Decision Support Systems Goals and Objectives	221
7.2.2	Decision Support Systems Program Planning and Management	222
7.2.3	Decision Support Systems Inventory and Monitoring	222
7.2.4	Decision Support Systems Management.....	222
7.2.5	Decision Support Systems Responsibilities	225
7.3	Other Programs Affecting Natural Resources Management.....	225
7.3.1	Real Property and Master Planning	225
7.3.2	Range and Training Land Program.....	226
CHAPTER 8. NATURAL RESOURCES IMPLEMENTATION.....		228
8.1	Natural Resources Implementation Goals and Objectives	228
8.2	Conservation Program Implementation	228
8.2.1	Conservation Program Implementation Plan	228
8.2.2	Conservation Program Management.....	228
8.3	Project Management Planning and Reporting.....	229
8.3.1	Integrated Natural Resources Management Plan	229
8.3.2	Management Activity Plans	230
8.3.3	Conservation and ITAM Work Plans.....	231
8.3.4	Environmental Program Requirement	231
8.3.5	Environmental Quality Report	232
8.3.6	Installation Status Report	232
8.4	Staffing.....	232

8.5 Program Management Mechanisms	234
8.5.1 Partnering and Obligation Mechanisms	235
8.5.2 Conservation Web Page	237
8.5.3 Conservation Newsletter	237
8.5.4 In-Progress Review	237
8.5.5 Conservation Team	238
8.6 Project Priorities and Funding.....	238
8.6.1 Project/Program Priorities	238
8.6.2 Funding	240
8.6.3 INRMP Implementation Costs.....	244
8.7 Command Support	245
CHAPTER 9. ENVIRONMENTAL CONSEQUENCES	246
9.1 No Action / Current Management Alternative.....	246
9.2 Proposed Management / Proposed Action Alternative	250
9.3 Cumulative Effects.....	251
9.4 Findings and Conclusions	252
LIST OF PREPARERS.....	253
REFERENCES	255
PERSONS CONTACTED.....	259
APPENDICES	260
APPENDIX A Specific Items of Cooperation Between the Bureau of Land Management, U.S. Fish and Wildlife Service, Alaska Department of Fish and Game, and U.S. Army Alaska.....	261
APPENDIX B Draft Memorandum of Understanding Between the Bureau of Land Management and U.S. Army Alaska for the Management of Military Lands in Alaska	266
APPENDIX C Other Agreements For Implementation Of Natural Resources Management On Army Lands In Alaska	266
APPENDIX D Management Action Plans To Support The INRMP	275
APPENDIX E Flora Of Fort Wainwright	280
APPENDIX F Fauna Of Fort Wainwright.....	289
APPENDIX G Federal Laws, Regulations, Executive Orders, Directives, And Policies.....	295
APPENDIX H. Response to Public Comments on Draft FWA INRMP	304
FINAL FINDING OF NO SIGNIFICANT IMPACT	

LIST OF TABLES

Table 1-1. Location of NEPA Analysis Sections within the INRMP	49
Table 1-2. INRMP Review Schedule.....	52
Table 2-1. Rare Plant Species Occurring on Fort Wainwright.	67
Table 2-2. Timber Resources on Fort Wainwright (Tanana Chiefs Conference, 1993)	69
Table 3-1. Ecosystem Management Plan.....	93
Table 3-2. Aerial Monitoring Management Plan.....	94
Table 3-3. Military Land Use.....	97
Table 3-4. Proposed Management Projects.....	110
Table 4-1. Training Requirements Integration.....	118
Table 4-2. Land Condition – Trend Analysis.	121
Table 4-3. Land Rehabilitation and Maintenance.....	122
Table 4-4. Environmental Awareness.....	124
Table 4-5. Soil Resources Management Plan.	127
Table 4-6. Soil and Water Quality Management Plan.	128
Table 4-7. Soil and Water Quality Monitoring.	129
Table 4-8. Soil Planning Level Survey.	130
Table 4-9. Floristics Planning Level Survey.....	131
Table 4-10. Vegetation Planning Level Survey.	132
Table 4-11. Topography Planning Level Survey.	132
Table 4-12. Surface Water Planning Level Survey.....	133
Table 4-13. Surface and Groundwater Quality Management.	134
Table 4-14. Erosion Control and Streambank Stabilization Projects.....	136
Table 5-1. Wetland Management Plan.....	141
Table 5-2. Wetland Monitoring.	143
Table 5-3. Wetland Planning Level Survey.	144
Table 5-4. Definition of Land Use Categories Used on the Environmental Limitations Overlays for USARAK during Summer Months.....	144
Table 5-5. Definition of Land Use Categories Used on the Environmental Limitations Overlays for USARAK during Winter Months.	146
Table 5-6. Wetland Management and Reclamation Projects.....	149
Table 5-7. Forest Management Plan.	151
Table 5-8. Forest Inventory.....	153
Table 5-9. Forest Management Areas.	154
Table 5-10. Forest Management Projects.	156
Table 5-11. Fire Management Plan.....	159
Table 5-12. Fire Management Inventory.	160
Table 5-13. Fire Management Projects.	164
Table 5-14. Habitat Management Plan.	166
Table 5-15. Fish and Wildlife Monitoring.	167
Table 5-16. Fauna Planning Level Survey.	169
Table 5-17. Fish Stocking on Fort Wainwright.	171
Table 5-18. Fish and Wildlife Population Management.	172
Table 5-19. Habitat Management Areas.	172
Table 5-20. Habitat Management.....	174
Table 5-21. Endangered Species Management.	177
Table 5-22. Special Interest Area Management Plan.	178
Table 5-23. Special Interest Area Management.	180
Table 5-23. Installation Pest Management Plan.....	182

Table 6-1. Education, Awareness and Public Outreach Management Plan	194
Table 6-2. Education, Awareness, and Public Outreach Management.....	196
Table 6-3. Outdoor Recreation Management.....	198
Table 6-4. Outdoor Recreation Monitoring	200
Table 6-5. Outdoor Recreation Management.....	209
Table 6-6. Conservation Enforcement Management Plan.....	211
Table 6-7. Conservation Enforcement Management	214
Table 7-1. Geographic Information System Management.....	224
Table 8-1. Conservation Program Management	229
Table 8-2. Integrated Natural Resources Management Plan.....	230
Table 8-3. Positions needed at Fort Wainwright to implement the INRMP.....	232
Table 8-4. Project Priorities	239
Table 8-5. Forestry Reserve Account Funding Requirements 2002-2006.....	240
Table 8-6. Agricultural Outlease Account Funding Requirements 2002-2006.	241
Table 8-7. Environmental Program Requirements.....	242
Table 8-8. ITAM Funding Requirements during 2002-2006	244
Table 9-1. Impacts of No Action/Current Management Alternative on the Environment.....	247
Mammals.....	289
Table H-1. Individual Comments Received and Response to Comments	311

LIST OF FIGURES

Figure 1-1. General Location of Fort Wainwright	54
Figure 1-2a. Fort Wainwright Land Acquisition.....	55
Figure 1-2b. Legend.....	56
Figure 2-1. Fort Wainwright Facilities	79
Figure 2-2. Fort Wainwright Transportation System.....	80
Figure 2-3. Fort Wainwright Terrain	81
Figure 2-4. Fort Wainwright Surface Geology	82
Figure 2-5. Fort Wainwright Soils	83
Figure 2-6. Fort Wainwright Surface Waters.....	84
Figure 2-7. Fort Wainwright Vegetation.....	85
Figure 2-8. Fort Wainwright Wetlands.....	86
Figure 2-9a. Fort Wainwright Wildlife Habitat	87
Figure 2-9b. Fort Wainwright Wildlife Habitat	88
Figure 2-10. Moose Habitat	89
Figure 2-11. Fort Wainwright Special Interest Areas.....	90
Figure 3-1. Military Land Use	112
Figure 3-2. Ecological Management Units	113
Figure 3-3a. Public Access	114
Figure 3-3b. Winter Corridor	115
Figure 4-1. Erosion Control/LRAM Management Areas	139
Figure 5-1. Environmental Limitations Overlay.....	186
Figure 5-2. Forest Management Areas.....	187
Figure 5-3. Fort Wainwright Fire History.....	188
Figure 5-4. Fire Management Areas	189
Figure 5-5. Fisheries Management Areas	190
Figure 5-6. ADF&G Game Management Units	191
Figure 5-7. Habitat Management Areas	192
Figure 6-1a. Outdoor Recreation Management Areas (FWA).....	217
Figure 6-1b. Outdoor Recreation Management Areas (YTA)	218
Figure 6-1c. Hunting Areas.....	219